

Review of: "[Commentary] Implications of HPV infectivity in early diagnosis and treatment of advanced/recurrent malignancies"

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Potential competing interests: No potential competing interests to declare.

Strengths:

Comprehensive Overview: The paper delivers a comprehensive and detailed exploration of the relationship between HPV and various cancers, ensuring a solid understanding of the subject matter.

Real-world Clinical Evidence: The inclusion of extensive data from cancer genomic medicine at Japanese national universities enhances the credibility of the study. The analysis of advanced cancers in relation to HPV16 or HPV18 infections provides valuable insights into the clinical landscape.

Insights into Immunotherapy: The paper provides valuable insights into the efficacy of immunotherapy, particularly with nivolumab, in HPV-positive and HPV-negative pharyngeal cancer cases. The exploration of tumor mutation burden (TMB) and Microsatellite Instability (MSI) adds depth to the discussion on immunotherapy effectiveness.

Innovative Immunotherapeutic Approach: The introduction of a novel approach involving pseudovirus infection to enhance anti-immunogenicity against malignant tumors demonstrates the paper's innovative thinking in the realm of anti-tumor immunotherapy.

Early Detection Methodology: The emphasis on using circulating HPV DNA for the early diagnosis of tumor recurrence represents a significant advancement in cancer diagnostics. The paper effectively positions this method as superior to traditional tumor markers.

Areas for Improvement:

Geographical Scope: The study primarily focuses on cancer genomic testing data from Japanese national universities, potentially limiting its generalizability. Including data from diverse populations would strengthen the applicability of the findings to a broader demographic.

Causation Clarification: While the paper highlights associations between HPV infections and various cancers, a clearer distinction between correlation and causation would enhance the overall understanding. Explicitly addressing the role of HPV as a contributing factor versus a direct cause is essential.

Comprehensive Discussion on HPV Vaccination: While the article touches upon the importance of HPV vaccination, a more comprehensive discussion on challenges, barriers, and strategies for promoting widespread vaccination would strengthen the practical implications of the study.

Explicit Future Research Direction: The paper suggests future research directions related to HPV infection, tumor mutation burden, and immunotherapy response. A more explicit delineation of these directions would provide a clearer roadmap for researchers in the field.